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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,000	12/19/2001	Nobuo Takeshita	2257-0202P-SP	8807
2292	7590	01/18/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			CHU, KIM KWOK	
			ART UNIT	PAPER NUMBER
			2653	
DATE MAILED: 01/18/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/021,000	TAKESHITA, NOBUO	
	Examiner	Art Unit	
	Kim-Kwok CHU	2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Remarks filed on 9/28/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 and 6-11 is/are allowed.
- 6) ☒ Claim(s) 5, 12 and 14 is/are rejected.
- 7) ☒ Claim(s) 13 and 15-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 1/26/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Remarks

1. Applicant's Amendment filed on September 28, 2005 has been fully considered.

Applicant states that independent claim 5 specifically recites "turning said lens holder on a first axis perpendicular to said support shaft" (page of the Remarks, lines 13 and 14).

With respect to this claimed feature, Applicant states that the prior art of Mochizuki does not teach above claimed feature because Mochizuki's lens holder 8 rotate around the axis of the support shaft 14 (page 9 of the Remarks, last line).

Accordingly, a newly found prior art of Wakabayashi et al. is used to reject claims 5 and 12.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 5, 12 and 14 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Wakabayashi et al. (U.S. Patent 5,319,497) in view of Oinoue et al. (U.S. Patent 6,044,048).

Wakabayashi teaches an optical head very similar to that of the instant invention as recited in claim 5. For example, Wakabayashi teaches the following:

(a) as in claim 5, an objective lens 1 for bringing light into focus (Fig. 4);

(b) as in claim 5, a lens holder 2 for holding the objective lens 1 (Fig. 4);

(c) as in claim 5, the lens holder 2 having a bearing hole formed along a direction parallel to an optical axis 11a of the objective lens 1 (Fig. 4; a bearing hole to fit a support shaft is an inherent feature in this type of lens drive

device so that the lens holder 2 can be rotated; column 1, lines 25-29);

(d) as in claim 5, a support shaft inserted in the bearing hole (Figs. 2; line 0a shows a support shaft);

(e) as in claim 5, an inclination drive unit (lens drive coils and magnets) for, according to the information about the inclination, turning the lens holder 2 on a first axis perpendicular (horizontally) to the support shaft (Figs. 4 and 5; coils and magnets are the driving force which turns/rotates the lens holder 2 in the direction θ which is perpendicular to the vertical axis 11a);

(f) as in claim 5, the inclination drive unit includes an electromagnetic drive means 3a, 3b, 7a, 7b, 8a and 8b (Fig. 4);

(g) as in claim 5, the electromagnetic drive means comprising a first element 3a mounted on the lens holder 2 on a second axis perpendicular to both the support shaft and the first axis perpendicular to the support shaft (Fig. 4; magnets 3a are positioned in another axis which is not in the same direction as the support shaft and the first axis);

(h) as in claim 5, a second element 3b located opposite to the first element 3a (Figs. 4); and

(i) as in claim 5, a magnetic material (additional permanent magnets), fixedly mounted on the lens holder 2 in close vicinity to the second element 3b of the electromagnetic

drive means (Fig. 4; at least two magnets besides 3a and 3b form the electromagnetic drive means; column 2, lines 2, lines 40-45).

However, Wakabayashi does not teach the following:

- (a) as in claim 5, a light emitted from a light source;
- (b) as in claim 5, an information recording medium where light is being focused on; and

- (c) as in claim 5, a light detector for receiving the light reflected from the information recording medium and outputting information about inclination of the objective lens relative to the information recording medium on the basis of the light received.

Oinoue teaches the following:

- (a) a light emitted from a light source 21 (Fig. 3);
- (b) an information recording medium 11 where light is being focused on (Fig. 6); and

- (c) a light detector 27 for receiving the light reflected from the information recording medium 11 and outputting information about inclination (servo movements) of the objective lens relative to the information recording medium 11 on the basis of the light received (Figs. 5 and 6).

An objective lens unit used in an optical information read/write system requires a light source, a light detector and a recording medium. In this case, although Wakabayashi's lens

drive device does not include the above necessary components to form the optical information read/write system, it would have been obvious to one of ordinary skill in the art to add such components to the objective lens unit similar to Oinoue's, because Wakabayashi's objective lens is used to focus a light beam on the recording medium to read/write information. The focused light beam is reflected and detected by the light detector so that the recorded information and the servo signals can be processed by the information read/write system.

4. Claims 12 and 14 have limitations similar to those treated in the above rejection, and are met by the reference as discussed above. Claim 14 however also recites the following limitation which is also taught in the prior art of Wakabayashi:

As in claim 14, a tracking drive unit 3a, 3b, at least part of the tracking drive unit being arranged on the first axis (Figs. 4 and 5; magnets 3a and 3b arranged/surrounded on the first axis are part of the tracking drive unit).

Allowable Subject Matter

5. Claims 1-4 and 6-11 are allowable over prior art.

6. Claims 13 and 15-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

As in claims 1 and 9, the prior art of record fails to teach or fairly suggests that the bearing hole having a diameter that increases while approaching the bearing hole's openings from the bearing hole's center.

As in claim 13, the prior art of record fails to teach or fairly suggests that a focusing drive unit including a coil wound around the support shaft.

As in claim 15, the prior art of record fails to teach or fairly suggests that the inclination drive unit includes a pair of coils arranged on the second axis on either side of the support axis.

As in claim 18, the prior art of record fails to teach or fairly suggests the following features:

(a) the inclination drive unit includes a pair of coils mounted on the lens holder, such that the coils are arranged on the second axis on either side of the support axis; and

(b) a pair of magnets mounted on the base, such that the magnets are arranged on the second axis on either side of the support axis.

The features indicated above, in combination with the other elements of the claims, are not anticipated by, nor made obvious over, the prior art of record.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nagashima (6,304,526) is pertinent because Nagashima teaches an optical head having an objective lens inclination driving means.

Tanaka (5,327,417) is pertinent because Tanaka teaches an optical head rotatable on a support shaft.

Horikawa (5,062,095) is pertinent because Horikawa teaches an optical head rotatable on a support shaft.

9. Any response to this action should be mailed to:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Or faxed to:

(571) 273-8300 (for formal communications intended for entry. Or:

(571) 273-7585, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Any inquiry of a general nature or relating to the status of this application should be directed USPTO Contact Center (703) 308-4357; Electronic Business Center (703) 305-3028.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim CHU whose telephone number is (571) 272-7585 between 9:30 am to 6:00 pm, Monday to Friday.

Kim-Kwok CHU

lc 1/11/06

Examiner AU2653
January 11, 2006

(571) 272-7585

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